This methodology note stands superseded. Refer to ICRA's website www.icra.in to view the updated methodology note on the sector.

ICRA

ICRA Rating Feature

Rating Methodology for Entities in the Oilfield Services Industry

RATING METHODOLOGY

December 2016

This rating methodology updates and supersedes ICRA's earlier methodology note on the sector, published in November 2014. While this revised version incorporates a few modifications, ICRA's overall approach to rating entities in the sector remains materially similar.

Overview

Oilfield services encompass a wide range of products and services that are used in exploration, development, extraction and transportation of oil and natural gas. The industry can be broadly divided into the following categories:

- Drilling companies: Companies engaged in drilling through the surface of the earth to reach oil and gas reservoirs found below the surface of land (onshore) and seabed (offshore)
- Drilling service providers: Companies providing seismic services such as surveying, interpreting and ascertaining the reservoir geology and other drilling-related services such as directional drilling and mud logging; onsite engineering, operational & maintenance services, manpower supply services; and those providing drilling mud, etc.
- Oilfield equipment manufacturing: Providing the necessary infrastructure and equipment (such as oil drilling and production tools) for oil and gas exploration

This rating methodology focuses on entities engaged in drilling services.

The global oilfield services industry, and in particular the drilling business, is characterised by high capital and technical intensity. Drilling is among the larger components of the cost of exploration and production. Other related services and equipment are lower down in terms of value addition because of the relatively lower technical and capital intensity. Nevertheless, the service and product quality required in the oil & gas industry are generally of a high order as the costs of failure of critical equipment might be too high for the upstream company. Besides, the industry is characterised by cyclicality as demand for these services is determined by upstream capital spending, which is highly influenced by the prevailing and expected oil & gas prices.

The domestic oilfield services industry is not very well developed in India with only a handful of companies owning drilling rigs and few service providers and manufacturers of repute. National Oil Companies (NOCs – such as Oil & Natural Gas Corporation Ltd. (ONGC) and Oil India Ltd. (OIL)) also own a large number of onshore rigs. However, the business is global in nature as foreign competitors compete for contracts of NOCs in the context of lack of domestic supply for a variety of services. India also does not have technological capability and economies of scale to manufacture offshore / onshore drilling equipment, such as drilling rigs, which are largely imported. Many of the domestic entities / groups that own rigs, own these through overseas subsidiaries / group companies due to tax benefits. However, smaller tools / consumables used in exploration, production and workover operations are produced domestically.

In the past, the Indian drilling companies were protected from competition from global players in the domestic market because of price preference given by NOCs. However, such preferential treatment was eliminated by the Government of India (GoI) in October 2014. Nevertheless, due to high operating costs for foreign players, several foreign players continue to provide their rigs for in-chartering to the domestic players instead of directly taking up the contracts.

Operating margins for rig-owning companies tend to be high in case of highly capital and technically intensive segments such as drilling, but net margins vary depending on capital-related charges. Drilling companies also employ the in-chartering model to reduce the financial risks associated with asset ownership. These players have significantly lower operating margins compared to rig-owning companies,

but capital employed in the business is correspondingly lower and hence, they may even have higher returns on capital employed at times. On the other hand, operating margins for other oilfield services vary depending largely on the technical intensity of operations and criticality of equipment to the exploration and production process.

In ICRA's opinion, the key determinants of the business risk profile of oilfield services companies are their scale of operations and diversity of fleet / products / services offered, technical sophistication of products / services, market position, geographic and customer diversity, operating track record and utilisation levels. ICRA's assessment also factors in the company's financial position and cost structure, asset acquisition policies, debt maturity profile, forex risk management systems, ability to generate retained cash flows to fund capital expenditure and off-balance sheet exposures. ICRA also assesses the rated entity's management for its growth plans, risk appetite and financial policies.

The list of rating drivers covered in this methodology note is not exhaustive by itself, but provides an overall perspective on the most important rating considerations. For analytical convenience, the key factors are grouped under the following broad heads—Business Risk Assessment, Regulatory Risk Assessment, Management Risk Assessment and Financial Risk Assessment.

- ***Business Risk***
  - Scale of Operations & Fleet Profile
  - Technical capability
  - Market Position
  - Day rates and utilisation
  - Cyclicality
  - Asset Acquisition / Chartering Philosophy
- ***Regulatory Risk***
- ***Financial Risk***
- ***Management Risk***

Business Risk Profile

Scale of Operations & Fleet Profile

The scale of operations of an oilfield services company depends on the size, profile and vintage of the rig fleet. For oilfield equipment manufacturing companies, scale of operations drive the diversity of product profile, economies of scale and ability to sell the products in the international market. With a large fleet and a diversified asset base encompassing rigs for onshore, offshore (shallow water, deepwater) etc., a company is able to provide drilling services in a variety of geologies. Hence, a large and diversified asset base in the contract drilling industry generally implies a sustainable revenue base, profitability and cash flows. Diversity of the fleet profile leads to a more competitive market position due to increased presence across the drilling value chain and technical expertise in different areas of operations. A diverse product / asset profile also mitigates demand risk and vulnerability to price competition in individual industry segments. Service companies that have effectively diversified their product profiles across the lifecycle of an oil & gas well generally exhibit more stable revenues and operating profile, leading to better profitability.

Day rates also depend on the vintage, with new generation rigs with better technical capabilities earning a premium over the other rigs. Newer rigs also generally do not suffer from breakdowns vis-a-vis older rigs. Nevertheless, while newer rigs command premium rates, older rigs which have been refurbished and have reasonable technical capabilities continue to remain in operation, particularly in easier geographies. Diversity of asset base is also positive from the point of view of ability of the company to compete in terms of cost structure and its ability to obtain financing to undertake capital projects.

Technical Capability

Prospecting and drilling activities are highly technical fields requiring deep knowledge of geology, oil and gas reservoir behavioural characteristic, data interpretation etc. In the initial phase of exploration, 2D and 3D seismic surveys are conducted over vast areas of the block to identify prospects, post which exploration

drilling is undertaken. Significant technical capability is involved in conducting 2D and 3D seismic surveys and data interpretation thereof and drilling activity. As exploration enters deeper waters, the drilling becomes more complex, costly and time consuming (ranging from months to years as compared with days for onshore drilling). Offshore drilling bears greater risks and hazards (marine, weather, pollution) and is accordingly more expensive. There are very few domestic oil field services companies that own deepwater assets due to the high level of capital cost and technical expertise involved. Offshore rigs remain in short supply in the country leading to part of the demand remaining unmet at times. The onshore rigs market is well supplied due to these being i) comparatively cheaper and ii) easier to operate and technologically less intensive than their offshore counterparts. Recent developments in the technologies of drilling have led to advanced techniques such as directional drilling and horizontal drilling for which specific expertise is required. These techniques are also used for extraction of non-conventional hydrocarbons (such as coal-bed methane).

A company's technical capability is generally reflected in its product offerings, operating track record and its ability to generate sustainable operating margins. Players operating more technically sophisticated rigs (mainly deepwater) earn higher day rates and have better profitability margins. On the downside, more technically sophisticated rigs warrant higher operational and maintenance expenditure. Technical sophistication also requires having on board more qualified (and hence costlier) technical personnel for smooth operation of the equipment.

Market Position

A company's market position is determined relative to the segments within the oilfield services value chain that it caters to and the geographies that it serves. Strong presence in a particular product or service or in a particular geography may lead to a highly competitive business position. Indian oilfield service providers generally have a limited strength on both these aspects as most of these companies have limited presence across the oilfield services value chain, besides having operations concentrated within India.

Customer concentration: Competitive intensity in the drilling business in India and particularly for contracts of NOCs (which offer advantages of longer tenure, rate stability and high payment security given the strong credit profiles) is generally of a high order. ONGC is the dominant player in the Indian exploration & production (E&P) industry. Day rates at which ONGC hires the rigs move largely in tandem with the global day rates and hence, are exposed to cyclicality. However, day rates in the Indian context are discounted to some extent to the internationally prevalent day rates due to high competition for these contracts and the high bargaining power of the domestic E&P players. Further, due to high customer concentration and rise in competition, some of the rig owners have suffered from low fleet utilisation rates and financial distress. Under this scenario, the ability of a rig owning company to operate internationally is viewed favourably.

Geographic diversity: Geographic diversity reduces vulnerability of revenues and profits to drilling activity in a particular region. Drilling activity varies across geographies based on presence of exploitable reserves, economic viability, regulatory and environmental factors. Further, greater geographical presence is also positive for the company's competitive positioning. Besides, presence in diverse regions leads to higher exposure to different geological conditions from the drilling perspective. From the point of view of oilfield equipment manufacturers, greater geographic diversity leads to more stability of revenues and access to bigger markets leading to a higher scale of operations, improved economies of scale and improved profitability. Production of many of these products is concentrated with certain globally reputed players who charge a premium for their products. Hence, domestic players who are able to produce these products at lower cost can gain through entry into international markets.

Day Rates & Utilisation

The drilling industry inherently is capital intensive in nature. Drilling rigs can cost from several million dollars (onshore) to several hundred million dollars (offshore). The high capital intensity of the business is, in fact, the biggest risk faced by the drilling companies as asset acquisition entails a significant amount of debt funding. Deployment of rigs at low day rates leads to pressure on the returns and liquidity position of these entities. Additionally, lack of deployment of a rig is also a significant risk. In the past, companies that acquired rigs during the upcycle at a high capital investment but were unable to contract the rigs with E&P players in a timely manner faced pressures on cash flows and profitability.

The profitability of a drilling company is dependent upon the utilisation levels of the rigs, which are, in turn, dependent upon the global crude prices and the demand for rigs. Further, the operational performance of the rigs also attains importance due to the high capital intensity of the business and the fact that day rates for a rig are of the order of thousands of dollars. Hence, each day that a rig passes without being contracted or utilised has significant opportunity costs.

The movement of day rates[1] is linked to the demand supply of rigs and other oil field services which in turn is influenced by the movement in energy prices. When energy prices escalate, the demand for oil field services increases owing to more fields becoming economical leading to an increase in utilisation rates and day rates and vice versa. When energy prices decline significantly, exploration and production companies may renegotiate rates downwards with the oil field services companies owing to the former's higher bargaining power. Consequently in case of a significant decline in energy prices, risk of renegotiation leading to lower revenues and margins of the oil field services' entity is assessed.

Cyclicality

Demand for oil field services is determined by upstream capital spending, with the latter influenced by prevailing and expected oil and gas prices. The industry's performance is prone to cyclicality of demand, with various products and services experiencing different levels of cyclicality. Movement in day rates is a function of demand-supply level for the drilling rigs, which are influenced by the availability of rigs (rig count), capacity utilisation and prevailing oil/gas prices. Consequently, rigs contracted for a longer period during a period of low prevalent day rates earn lower returns for a prolonged period.

Asset Acquisition / Chartering Philosophy

There are two types of business models in the Indian drilling industry: (i) Asset ownership model, where the operator owns and operates the asset (ii) In-charter model wherein the operator does not own the asset on its books, but acts as the operator or an agent. Though rig ownership entails large capex, day-to-day expenses are of a lower order and comprise largely of employee costs, fuel costs, insurance costs, etc. Due to lower day-to-day expenses, operating margins are moderately high under the asset ownership model. For asset-owning companies, a large portion of the cash flows of the contract constitute its operating profitability, with the major costs being the capital-related costs (depreciation, interest on debt, etc.). On the other hand, in the in-charter model, the operator earns only a small spread from the overall contribution of the contract, with the rest of the contribution being the cost of chartering the rig, which goes to the asset-owning company. The charter model is favourable in countries such as India, where the industry is not significantly developed as yet. Consequently, domestic companies who do not own rigs, charter them from global suppliers and earn a spread for managing day-to-day operations and liaisoning with domestic E&P companies, etc. Though the latter model leads to lower profitability vis-a-vis asset ownership, it also involves low capital intensity and funding risks and moderate returns depending on the spread between in-charter[2] and out-charter rates. On the other hand, the former model leads to high profitability but returns may be lower at times due to high capital intensity and high funding risks, particularly in the initial years. However, once the debt is repaid, the profitability and cash flows for the asset-owning company have the potential to improve manifold.

ICRA assesses the philosophy of the company's management with regard to its asset acquisition policies and the nature of its cash outflow vis-a-vis its cash inflows. For asset owning companies, cash outflows which correlate closely to their earnings profile for an extended period of time are favourable. For companies operating through the in-chartering model, established relationships with global players leading to access to a diverse rig base is favourable.

[1] With the steep fall in crude oil prices globally since Q3 FY2015, the oilfield services industry has been adversely impacted. Total contracted utilisation has declined significantly across all segments and day rates have declined by ~30-40% globally. Further, the outlook on day rates remains weak in the medium term on account of weak energy prices outlook

[2] A charter is an arrangement for hiring of a vessel/rig/equipment. Oil field services companies hire a vessel/rig from the owner (usually a overseas entity) which is called in-chartering and the same is further hired out to an Upstream exploration and production company which is called out-chartering. Owned rigs/vessels are also deployed under out-chartering.

Regulatory Risk

Competition in the drilling services business is at a global level with contracts being awarded through a competitive bidding process based on various parameters including technical experience, rig specification, availability and price. However, owing to earlier existing price preference for Indian operators (up to 10% of the L1 bid of a foreign player) in contracts (offered by NOCs), global majors preferred to foray into the Indian markets through association with a local partner. Having a local tie up also eased the process of liaison and day-to-day management with PSUs. In October 2014, the GoI decided to do away with the price preference clause due to (a) sufficient exposure of the domestic drilling industry to international operating environment as the clause had been valid for three decades (b) abolition of Administered Pricing Mechanism (APM) due to which additional cost to oil companies which was earlier reimbursed under APM would have to be borne by the NOCs and (c) reduced participation by foreign bidders leading to restricted competition. Nevertheless, due to high operating costs for foreign players, several foreign players continue to provide their rigs for in-chartering to the domestic players instead of directly taking up the contracts.

Management Risk

All debt ratings necessarily incorporate an assessment of the quality of the entity's management as well as the strengths / weaknesses arising from the entity's being a part of an established group of companies. Also of importance are the entity's likely cash outflows arising from the possible need to support other group entities, in case the entity is among the stronger entities within the group. Usually, a detailed discussion is held with the management of the entity to understand its business objectives, plans and strategies, and views on past performance, besides the outlook on the entity's industry. Some of the other points assessed are:

- Experience of the promoter / management in the line of business concerned
- Commitment of the promoter/management to the line of business concerned
- Attitude of the promoter / management to risk taking and containment
- The entity's policies on leveraging, interest risks and currency risks
- The entity's plans on new projects, acquisitions, expansion, etc.
- Strength of the other companies belonging to the same group as the entity
- The ability and willingness of the group to support the entity through measures such as capital infusion, if required

Financial Risk

The objective here is to determine the entity's current financial position, its financial risk profile and financial flexibility. Some of the aspects analysed in detail in this context are

Cost structure: Operating charges and capital servicing charges would largely constitute the cost structure of a drilling service provider, which contracts assets to an upstream company. Operating charges mainly comprise technical personnel and crew expenses, repair and maintenance expenditure, insurance for equipment breakdown and administrative expenses. Capital costs comprise interest, depreciation and in-charter expenses (in case the asset has been in-chartered from another player). Insurance for breakdown is important as a company can lose significant revenues if a rig is non-operational for a longer period of time. Further, dry docking expenditure is also incurred at periodic intervals (typically every 3-5 years).

Operating charges and dry docking expenditure are largely a function of the age of the asset and regulations. Capital servicing charges are influenced by the acquisition cost, funding strategy adopted for fleet acquisitions and residual life of the fleet. Highly debt-funded new rigs will entail higher capital servicing charges. The operating day rate bid by the drilling services provider will generally account for both the operating charges and capital costs, while non-operating day rates will account for fixed operating charges and capital costs.

Higher the cost of the rig, lower will be the ability to weather the cyclical downturn in day rates. A key metric to capture this risk is to compute the effective day rate (EDR) – the weighted average day rate based on the expected operating, non-operating, moving and breakdown hours, generally taken at 88%, 4%, 4% and

4% respectively – being earned by each rig and compare it with the current day rates and anticipated day rates during the next few years based on forecasted demand-supply for the region. Higher the contribution between the EDR / anticipated day-rates and operating and capital costs, better it would be from the rating perspective.

Operating profitability and returns: The analysis here focuses on determining the trend in the entity's operating profitability based on the business models (in-chartering / owned assets) and how the same appears by peer comparison. The returns that a company generates on the capital employed / assets are critical to its credit strength. If a rig-owning company overpays for asset acquisition, its returns will suffer. Ability to generate returns across the cycle is also critical to its credit strength.

Financial policies to acquire assets: Generally, drilling rigs are funded with a high leverage because of relatively high comfort of the lenders with such a funding strategy arising from the liquid nature of the collateral. However, from the rating point of view, which aims to capture the timeliness of debt service rather than the ultimate recovery by the lenders, it may not really be a source of primary comfort as there can be marginal time delays (largely procedural in nature) in taking possession and disposing the same. Hence, higher leverage does translate to higher financial risk profile, albeit may not be of the order of manufacturing companies (including oilfield services manufacturing companies). ICRA thus assesses the financial policies of the issuing management with regard to its overall capital structure, keeping adequate cash balances to act as a cushion during downturn and maintaining certain level of coverage and leverage indicators (Total Debt/OPBDITA, OPBDITA/Interest, DSCR, etc) and gearing ratios.

Debt maturity profile: Long maturity profile of the loans can partially offset the risk associated with high financial leverage, as the payback period for rig acquisitions can be long. In this context, the ability of the entity to access long-term loans from foreign lenders is assessed as the appetite of the Indian lenders for long term foreign currency loans is limited. Besides, funding of the loan in a currency where most of the revenues are generated could translate to competitive interest costs, thereby lowering the cost of capital. As oilfield services business is global in nature, access to long maturity loans at competitive rates is considered a key competitive advantage. Nevertheless given the cyclicality of the industry the ability to service debt upon expiry of the current contract is assessed under different scenarios.

Financial flexibility: ICRA also assesses the financial flexibility enjoyed by the entity such as refinancing ability, access to unencumbered vessels, liquid investments etc., which can also partly offset the high financial risk profile.

Retained cash flows through the business cycle: An oilfield services company's cash generation is significantly impacted by the inherent volatility of day rates, resulting in volatile operating cash flows. Given the capital intensity of the industry, most companies have significant cash needs to re-invest in new assets. A stable and strong retained cash flow helps liquidity and provides flexibility to invest in new rigs. Besides, positive retained cash flow is an indicator of an entity's ability to service the debt in a timely manner. Debt protection indicators such as RCF/Total Debt and RCF/Interest are also analysed to see how long it would take for the entity to repay its debt and cushion available for servicing interest.

Other areas which are analysed include the following:

- ***Trends in receivables:*** Due to high customer concentration in the domestic oilfield services industry, cash flow issues may sometimes arise due to delays in clearing receivables from the key customers. Cash flows in one contract may sometimes get affected due to dispute in another contract, although not necessarily. ICRA analyses the trends in receivables, contingent liabilities arising out of disputes, etc. with customers and suppliers and operating track record of the players to evaluate risks to cash flows and its impact on debt servicing.
- ***Working capital intensity:*** The analysis here evaluates the trends in the entity's key working capital indicators like Receivables, Inventory and Creditors, again with respect to industry peers.
- ***Foreign currency related risks:*** Such risks arise if an entity's major costs and revenues are denominated in different currencies. Examples in the oilfield services industry would include revenue receipts in dollar terms and debt repayment in rupee terms, rendering the rupee payments

vulnerable to any sustained appreciation of the rupee. The foreign currency risk can also arise from un-hedged liabilities for companies earning most of their revenues in local currency. The focus here is on assessing the hedging policy of the entity concerned in the context of the tenure and nature of its contracts with clients (short term/long term, fixed price/variable price).

- ***Tenure mismatches, and risks relating to interest rates and refinancing:*** Large dependence on short-term borrowings to fund long-term investments can expose an entity to significant re-financing risks, especially during periods of tight liquidity. The existence of adequate buffers of liquid assets / bank lines to meet short-term obligations is viewed positively. Similarly, the extent to which an entity would be impacted by movements in interest rates is also evaluated.
- ***Accounting quality:*** Here, the Accounting Policies, Notes to Accounts, and Auditor's Comments are reviewed. Any deviation from the Generally Accepted Accounting Practices is noted and the financial statements of the entity are adjusted to reflect the impact of such deviations.
- ***Contingent liabilities / Off-balance sheet exposures:*** Off-balance sheet exposures in the drilling industry may be high as rig acquisitions are sometimes funded through overseas associates, which may require corporate guarantees from the Indian entity. Moreover, performance guarantees are offered to the E&P companies, which may be encashed in the event of performance slippages. In these cases, the likelihood of devolvement of contingent liabilities / off-balance sheet exposures and the financial implications of the same are evaluated.

Summing up

Rating of oilfield services companies involves an assessment of business risk, management risk and financial risk profile. The cyclicality of the oil & gas sector exposes the oilfield services sector to a high business risk profile, although it can be partly offset by adoption of prudent business and financial risk mitigants. The final rating assessment is based on both quantitative and qualitative factors, with more emphasis on future cash flow generation and debt servicing ability.

ICRA Limited

CORPORATE OFFICE
Building No. 8, 2nd Floor, Tower A, DLF Cyber City, Phase II, Gurgaon—122002
Tel.: +(91 124) 4545 300; Fax: +(91 124) 4050 424

REGISTERED OFFICE
Kailash Building, 11th Floor; 26, Kasturba Gandhi Marg; New Delhi—110001
Tel.: + (91 11) 2335 7940-50; Fax: +(91 11) 2335 7014, 2335 5293
Email: info@icraindia.com Website: www.icra.in

Branches: **Mumbai**: Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 o **Chennai**: Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 o **Kolkata**: Tel + (91 33) 2287 0450, 2240 6617/8839, 2280 0008, Fax + (91 33) 2287 0728 o **Bangalore**: Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 o **Ahmedabad**: Tel + (91 79) 4027 1500, Fax + (91 79) 2658 4924 o **Hyderabad**: Tel +(91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 o **Pune**: Tel + (91 20) 2552 0194/95/96, Fax + (91 20) 2553 9231